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Notice of Independent Review Decision

December 24, 2014

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE:
MRI L spine without contrast 72146, 72148

A DESCRIPTION OF THE QUALIFICATIONS FOR EACH PHYSICIAN OR OTHER HEALTH CARE PROVIDER WHO REVIEWED THE DECISION:
The Reviewer is a Board Certified Orthopaedic Surgeon with over 42 years of experience.

REVIEW OUTCOME:

Upon independent review, the reviewer finds that the previous adverse determination/adverse determinations should be:

☒ Upheld (Agree)

Provide a description of the review outcome that clearly states whether medical necessity exists for each of the health care services in dispute.

PATIENT CLINICAL HISTORY [SUMMARY]:
The claimant is a female who reported an injury on xx/xx/xx. She has been treated for low back pain.

01/03/2014: Progress Notes. Pain scale: 4. Treatment: Cervical-right, upper thoracic-right.

06/04/2014: Progress Notes. Pain scale: 4. Current symptoms: Upper back stiffness bilateral, low back stiffness bilateral, shoulder pain on the right anterior. Assessment: Improving slowly.

09/24/2014: Progress Notes. Pain scale: 5. The patient's treatment today consisted of No spinal manipulation due to patients request.

10/22/2014: UR. Rationale for denial: The claimant reported work injury on xx/xx/xx. She has been treated for low back pain. There is an office note dated 10/04/12 indicating left side lumbar pain and left SI joint pain. Pain radiated into the left thigh to the knee and she reported numbness lateral aspect of her thigh that was becoming worse over last 3-4 months. On exam the claimant had decreased lumbar range of motion and tenderness of the lumbar paraspinal muscles and left PSIS. There was full motor strength, normal sensory exam, and normal reflexes. There was a positive FARBER test, positive SI joint tenderness and positive hip thrust maneuver. The impression was left SI joint pain and lumbar back pain. The physician noted a lumbar MRI done on 6/22/11 that showed a 3 millimeter disc bulge and an annular tear with desiccation at the L4-5 and a 2 millimeter disc protrusion at L5-S1. The physician described Motrin, Ultram. Conservative treatment has consisted of physical therapy, medication and work restrictions. Had right RC repair 9/19/13. Completed 34 postop PT with chiropractor. Patient continued reporting pain 8/10 VAS. 4/8/14 MRI arthrogram noted good repair with only small partial RC tear. She is continued to have regular treatment of only passive interferential.

An MRI of the thoracic and lumbar spine without contrast would not be considered medically necessary and appropriate based upon the records provided in this case and the Official Disability Guidelines. Official Disability Guidelines support a repeat MRI if there is a significant change in symptoms and/or findings suggestive of significant pathology. In this case, there is no change in this claimant's chronic back pain symptoms. There is no documentation of any type of change in the neurologic examination which would be concerning for a neurocompressive lesion. There is no documentation provided at all as to why a thoracic spine MRI would be required. Therefore, based upon the Official Disability Guidelines, MRI of the thoracic spine and repeat MRI of the lumbar spine without contract would not be considered medically necessary and appropriate in this case.

11/03/2014: UR. Rational for denial: The request for thoracic spine MRI without contrast is non-certified. The patient complained of ongoing mid and low back pain. There is no documentation of abnormal deep tendon reflexes or motor or sensory dysfunction in the upper or lower extremities, any hyper or hypoesthesia in the thoracic dermatomes or weakness of any of the major muscle groups trauma with neurological deficits identified. No information was submitted regarding neurological involvement at the thoracic spine. Given this, the request is not indicated as medically necessary. Regarding MRI of the lumbar spine, repeat MRI is only recommended if there is significant change in symptoms &/or findings suggestive of significant pathology. In this case, there is no documentation of change in the patient's chronic low back pain symptoms. The visit notes for August & September of 2014 do not document any radicular complains, abnormal deep tendon reflexes or motor sensory dysfunction in the lower extremities. As such, the request is not indicated as medically necessary.

11/14/2014: Progress Notes. Pain Scale: 5. Assessment: Improving slowly.

ANALYSIS AND EXPLANATION OF THE DECISION INCLUDE CLINICAL BASIS, FINDINGS, AND CONCLUSIONS USED TO SUPPORT THE DECISION:

The previous adverse determinations are upheld. There has not been any indication of neurological changes in the lumbar spine since the last MRI and no information was submitted regarding neurological involvement at the thoracic spine. Per ODG guidelines, repeat MRI is not routinely recommended and should be reserved for a significant change in symptoms and/or findings. Therefore, the request for MRI L spine without contrast 72146, 72148 is non-certified.

ODG Guidelines:

MRIs (magnetic resonance imaging)	Recommended for indications below. MRI's are test of choice for patients with prior back surgery, but for uncomplicated low back pain, with radiculopathy, not recommended until after at least one month conservative therapy, sooner if severe or progressive neurologic deficit. Repeat MRI is not routinely recommended, and should be reserved for a significant change in symptoms and/or findings suggestive of significant pathology (eg, tumor, infection, fracture, neurocompression, recurrent disc herniation). (Bigos, 1999) (Mullin, 2000) (ACR, 2000) (AAN, 1994) (Aetna, 2004) (Airaksinen, 2006) (Chou, 2007) Magnetic resonance imaging has also become the mainstay in the evaluation of myelopathy. An important limitation of magnetic resonance imaging in the diagnosis of myelopathy is its high sensitivity. The ease with which the study depicts expansion and compression of the spinal cord in the myelopathic patient may lead to false positive examinations and inappropriately aggressive therapy if findings are interpreted incorrectly. (Seidenwurm, 2000) There is controversary over whether they result in higher costs compared to X-rays including all the treatment that continues after the more sensitive MRI reveals the usual insignificant disc bulges and herniations. (Jarvik-JAMA, 2003) In addition, the sensitivities of the only significant MRI parameters, disc height narrowing and anular tears, are poor, and these findings alone are of limited clinical importance. (Videman, 2003) Imaging studies are used most practically as confirmation studies once a working diagnosis is determined. MRI, although excellent at defining tumor, infection, and nerve compression, can be too sensitive with regard to degenerative disease findings and commonly displays pathology that is not responsible for the patient's symptoms. With low back pain, clinical judgment begins and ends with an understanding of a patient's life and circumstances as much as with their specific spinal pathology. (Carragee, 2004) Diagnostic imaging of the spine is associated with a high rate of abnormal findings in asymptomatic individuals. Herniated disk is found on magnetic resonance imaging in 9% to 76% of asymptomatic patients; bulging disks, in 20% to 81%; and degenerative disks, in 46% to 93%. (Kinkade, 2007) Baseline MRI findings do not predict future low back pain. (Borenstein, 2001) MRI findings may be preexisting. Many MRI findings (loss of disc signal, facet arthrosis, and end plate signal changes) may represent progressive age changes not associated with acute events. (Carragee, 2006) MRI abnormalities do not predict poor outcomes after conservative care for chronic low back pain patients.

	(Kleinstück, 2006) The new ACP/APS guideline as compared to the old AHCPR guideline is more forceful about the need to avoid specialized diagnostic imaging such as magnetic resonance imaging (MRI) without a clear rationale for doing so. (Shekelle, 2008) A new meta-analysis of randomized trials finds no benefit to routine lumbar imaging (radiography, MRI, or CT) for low back pain without indications of serious underlying conditions, and recommends that clinicians should refrain from routine, immediate lumbar imaging in these patients. (Chou-*Lancet*, 2009) Despite guidelines recommending parsimonious imaging, use of lumbar MRI increased by 307% during a recent 12-year interval. When judged against guidelines, one-third to two-thirds of spinal computed tomography imaging and MRI may be inappropriate. (Deyo, 2009) As an alternative to MRI, a pain assessment tool named Standardized Evaluation of Pain (StEP), with six interview questions and ten physical tests, identified patients with radicular pain with high sensitivity (92%) and specificity (97%). The diagnostic accuracy of StEP exceeded that of a dedicated screening tool for neuropathic pain and spinal magnetic resonance imaging. (Scholz, 2009) Clinical quality-based incentives are associated with less advanced imaging, whereas satisfaction measures are associated with more rapid and advanced imaging, leading Richard Deyo, in the Archives of Internal Medicine to call the fascination with lumbar spine imaging an idolatry. (Pham, 2009) Primary care physicians are making a significant amount of inappropriate referrals for CT and MRI, according to new research published in the *Journal of the American College of Radiology*. There were high rates of inappropriate examinations for spinal CTs (53%), and for spinal MRIs (35%), including lumbar spine MRI for acute back pain without conservative therapy. (Lehnert, 2010) Degenerative changes in the thoracic spine on MRI were observed in approximately half of the subjects with no symptoms in this study. (Matsumoto, 2010) This large case series concluded that iatrogenic effects of early MRI are worse disability and increased medical costs and surgery, unrelated to severity. (Webster, 2010) Routine imaging for low back pain is not beneficial and may even be harmful, according to new guidelines from the American College of Physicians. Imaging is indicated only if they have severe progressive neurologic impairments or signs or symptoms indicating a serious or specific underlying condition, or if they are candidates for invasive interventions. Immediate imaging is recommended for patients with major risk factors for cancer, spinal infection, cauda equina syndrome, or severe or progressive neurologic deficits. Imaging after a trial of treatment is recommended for patients who have minor risk factors for cancer, inflammatory back disease, vertebral compression fracture, radiculopathy, or symptomatic spinal stenosis. Subsequent imaging should be based on new symptoms or changes in current symptoms. (Chou, 2011) The National Physicians Alliance compiled a "top 5" list of procedures in primary care that do little if anything to improve outcomes but excel at wasting limited healthcare dollars, and the list included routinely ordering diagnostic imaging for patients with low back pain, but with no warning flags, such as severe or progressive neurologic deficits, within the first 6 weeks. (Aguilar, 2011) Owning MRI equipment is a strongly correlated with patients receiving MRI scans, and

	having an MRI scan increases the probability of having surgery by 34%. (Shreibati, 2011) A considerable proportion of patients may be classified incorrectly by MRI for lumbar disc herniation, or for spinal stenosis. Pooled analysis resulted in a summary estimate of sensitivity of 75% and specificity of 77% for disc herniation. (Wassenaar, 2011) (Sigmundsson, 2011) Accurate terms are particularly important for classification of lumbar disc pathology from imaging. (Fardon, 2001) (Fardon, 2014) Among workers with LBP, early MRI is not associated with better health outcomes and is associated with increased likelihood of disability and its duration. (Graves, 2012) There is support for MRI, depending on symptoms and signs, to rule out serious pathology such as tumor, infection, fracture, and cauda equina syndrome. Patients with severe or progressive neurologic deficits from lumbar disc herniation, or subjects with lumbar radiculopathy who do not respond to initial appropriate conservative care, are also candidates for lumbar MRI to evaluate potential for spinal interventions including injections or surgery. For unequivocal evidence of radiculopathy, see AMA Guides. (Andersson, 2000) MRI with and without contrast is best test for prior back surgery. (Davis, 2011) See also ACR Appropriateness Criteria™. See alsoStanding MRI. *Recent research:* More than half of requests for MRI of the lumbar spine are ordered for indications considered inappropriate or of uncertain value, pointing to evidence of substantial overuse of lumbar spine MRI scans. For family physicians, only 34% of their MRI scans were considered appropriate vs 58% of those ordered by other specialties. On the other hand, the vast majority of MRIs ordered for headaches, 83%, were deemed appropriate. (Emery, 2013) This study casts doubt on the value of post-op spinal imaging for patients with sciatica, because it could not distinguish those with a favorable clinical outcome from those with persistent symptoms. Disk herniation was visible in 35% of patients with a favorable outcome and in 33% with an unfavorable outcome, and nerve root compression was present in 24% of those with a favorable outcome and in 26% of those with an unfavorable outcome. They concluded that the MRI scan does not have any discriminatory power at all. Irrelevant findings have the potential to frighten patients and initiate cascades of unnecessary testing or intervention, with occasional risks. The study showed that neither a herniated disk nor the presence of scar tissue on MRI was associated with patient outcome, but these findings may lead to unnecessary further imaging and surgery. (el Barzouhi, 2013) A *JAMA* article on worsening trends for low back treatment found that there was an escalation in the use of MRI or CT, from 7.2% in 1999 to 11.3% in 2010, while imaging in the acute care setting provides neither clinical nor psychological benefit to patients with routine back pain. The general feeling among physicians was that patients may equate getting MRIs with being synonymous with good medical care, which could drive doctors to try to improve patient satisfaction. (Mafi, 2013) Clinicians should be aware of the diagnostic limitations of MRI as there is significant variability in the interrater and intrarater agreements of MRI in assessing different degenerative conditions of the lumbar spine. (Fu, 2014) The impact of nonadherent early MRI includes a wide variety of expensive and potentially unnecessary services, and occurs relatively soon post-MRI, with early MRI having as much as 55 times the likelihood of

	advanced imaging, injections, and surgery within six months post-MR. (Webster, 2014) **Indications for imaging -- Magnetic resonance imaging:** - Thoracic spine trauma: with neurological deficit - Lumbar spine trauma: trauma, neurological deficit - Lumbar spine trauma: seat belt (chance) fracture (If focal, radicular findings or other neurologic deficit) - Uncomplicated low back pain, suspicion of cancer, infection, other "red flags" - Uncomplicated low back pain, with radiculopathy, after at least 1 month conservative therapy, sooner if severe or progressive neurologic deficit. - Uncomplicated low back pain, prior lumbar surgery - Uncomplicated low back pain, cauda equina syndrome - Myelopathy (neurological deficit related to the spinal cord), traumatic - Myelopathy, painful - Myelopathy, sudden onset - Myelopathy, stepwise progressive - Myelopathy, slowly progressive - Myelopathy, infectious disease patient - Myelopathy, oncology patient

A DESCRIPTION AND THE SOURCE OF THE SCREENING CRITERIA OR OTHER CLINICAL BASIS USED TO MAKE THE DECISION:

- ☐ **ACOEM- AMERICAN COLLEGE OF OCCUPATIONAL & ENVIRONMENTAL MEDICINE UM KNOWLEDGEBASE**
- ☐ **AHCPR- AGENCY FOR HEALTHCARE RESEARCH & QUALITY GUIDELINES**
- ☐ **DWC- DIVISION OF WORKERS COMPENSATION POLICIES OR GUIDELINES**
- ☐ **EUROPEAN GUIDELINES FOR MANAGEMENT OF CHRONIC LOW BACK PAIN**
- ☐ **INTERQUAL CRITERIA**
- ☒ **MEDICAL JUDGEMENT, CLINICAL EXPERIENCE, AND EXPERTISE IN ACCORDANCE WITH ACCEPTED MEDICAL STANDARDS**
- ☐ **MERCY CENTER CONSENSUS CONFERENCE GUIDELINES**
- ☐ **MILLIMAN CARE GUIDELINES**
- ☒ **ODG- OFFICIAL DISABILITY GUIDELINES & TREATMENT GUIDELINES**
- ☐ **PRESSLEY REED, THE MEDICAL DISABILITY ADVISOR**
- ☐ **TEXAS GUIDELINES FOR CHIROPRACTIC QUALITY ASSURANCE & PRACTICE PARAMETERS**
- ☐ **TEXAS TACADA GUIDELINES**
- ☐ **TMF SCREENING CRITERIA MANUAL**
- ☐ **PEER REVIEWED NATIONALLY ACCEPTED MEDICAL LITERATURE (PROVIDE A DESCRIPTION)**
- ☐ **OTHER EVIDENCE BASED, SCIENTIFICALLY VALID, OUTCOME FOCUSED GUIDELINES (PROVIDE A DESCRIPTION)**